

Contribution to the knowledge of the Histeridae of Pakistan (Coleoptera)

by

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With 17 figures

ABSTRACT

Thirty-one species of Histeridae are listed for Pakistan, most of which are reported for the first time from this country. *Anapleus monticola* sp. n., *Abraeomorphus indus* sp. n., *Eutriptus xerxes* sp. n., *Tribalus pakistanicus* sp. n., and *T. asiaticus* sp. n. are described. Zoogeography and phylogeny of Pakistani histerids are discussed.

INTRODUCTION

The histerid fauna of Pakistan is very poorly known, only seven species have been reported so far. Material collected mainly by I. Löbl, C. Besuchet and, to a lesser extent, also by R. Hołynski (Milanówek, Poland) raises the number of species known to occur in Pakistan to thirty-one.

The author is indebted to the persons mentioned above for the privilege of studying the histerids.

Specimens collected by I. Löbl and C. Besuchet are preserved in the Muséum d'histoire naturelle, Geneva, and those of R. Hołynski in the author's collection.

1. *Teretrius mogul* Lewis, 1911

Locality: Lahore (LEWIS 1911: 78).

Distribution: Known so far only from Pakistan.

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2. *Teretriosoma intrusum* (Marseul, 1870)

Locality: Lahore (LEWIS 1911: 78).

Distribution: Pakistan, East India, Tenasserim, Viet-Nam.

3. *Saprinus uvarovi* G. Müller, 1954

Locality: Rawalpindi: Dhok Pathan near Pindi Gheb (DAHLGREN 1968: 260).

Distribution: Saudi Arabia, Pakistan, Afghanistan.

4. *Saprinus flexuosofasciatus* Motschulsky, 1845

Localities: Lahore, 4.VI.1975, 2 ex., leg. R. Holyński; Chitral: near Bumburet, 25.V.1983, 2500 m, leg. I. Löbl-C. Besuchet, 1 ex.

Distribution: Asia Minor, Iraq, Iran, Central Asia, Tibet, India, Pakistan.

5. *Saprinus quadriguttatus* (Fabricius, 1798)

Locality: Lahore, 4.VI.1975, leg. R. Holyński, 2 ex.

Distribution: Afghanistan, Pakistan, India, Bangla-Desh, Taiwan, Sumatra, Indochina.

6. *Saprinus splendens* (Paykull, 1811)

Locality: Lahore, 4.VI.1975, leg. R. Holyński, 52 ex.

Distribution: A widely distributed species, occurring in the tropical Africa, Arabia, Kashmir, Afghanistan, the Oriental Region, Japan and Australia. New to Pakistan.

7. *Saprinus sternifossa* G. Müller, 1937

Localities: Chitral: Bumburet, 24.V.1983, 2200-2350 m, 1 ex.; near Bumburet, 25.V.1983, 2500 m, leg. I. Löbl-C. Besuchet, 3 ex.

Distribution: Kazakh and Uzbek SSR, Iran, West China. New to Pakistan.

8. *Saprinus frontistrius* Marseul, 1855

Locality: Swat: Marghuzar, south of Saidu Sharif, 8.V.1983, 1300 m, leg. I. Löbl-C. Besuchet, 3 ex.

Distribution: Sri Lanka, Viet-Nam, China. New to Pakistan.

9. *Saprinus austerus* Reichardt, 1930

Localities: Chitral: above Madaglasht, 27.V.1983, 2900-3000 m, 6 ex.; near Bumburet, 25.V.1983, 2500 m, 2 ex., leg. I. Löbl-C. Besuchet.

Distribution: Pamir, Afghanistan, Central Asia. New to Pakistan.

10. *Saprinus subvirescens* (Ménétries, 1832)

Locality: Chitral: above Madaglasht, 27.V.1983, 2900-3000 m, leg. I. Löbl-C. Besuchet, 1 ex.

Distribution: South Russia, Caucasus, Central Asia, Turkey, Syria, Israel, Iraq, Iran, Afghanistan, India, Burma, China. New to Pakistan.

11. *Chalcionellus pulchellus* (Fabricius, 1798)

Locality: Swat: Karakar Pass, 19.V.1983, 1300 m, leg. I. Löbl-C. Besuchet, 1 ex.

Distribution: India, Sri Lanka, Burma, Afghanistan. New to Pakistan.

12. *Anapleus monticola* sp. n.

Body oval, convex, dark brownish to black, shiny. Antennae and legs paler. Forehead impressed between eyes, distinctly and densely punctured (0.2-0.5), without striae.

Pronotum strongly narrowed anteriorly, rather coarsely punctured (1-3). Marginal stria complete and distinct. Anterior margin with two shallow impressions behind the eyes. Pronotal basis with two impressions in front of scutellum.

Elytra (Fig. 1) broadest at humeri, coarsely punctured (0.5-2.0), the punctures larger than on pronotum. Lateral margins elevated, with indistinct trace of stria (subhumeral?). Elytral basis with some short dorsal striae. With shallow fovea beyond each humeral knob. Apex with some irregular rows of punctures, the punctures confluent. Both marginal and epipleural striae complete.

Propygidium short, densely but finely punctulate (0.5-1.0). Pygidium paler, distinctly but not too densely punctured (1-3).

Prosternal lobe indistinctly margined, densely and rather coarsely punctured (0.2-0.5). Prosternum nearly quadrate, its carinal striae distinct, parallel, joining the small foveae at anterior margin. The punctation coarse and rather dense anteriorly, becoming progressively finer and sparser basally.

Mesosternum (Fig. 2) short, not margined anteriorly, rather densely and coarsely punctured (0.3-1.0). Meso-metasternal suture indistinct, a little elevated but not zigzagged. Metasternum convex medially, coarsely and densely punctured laterally and apically, the punctures finer and smaller medially. Median line fine, weakly impressed in apical part. Abdominal segment I punctured as metasternum except the anterior margin, where the punctures are smaller and finer.

Anterior tibiae (Fig. 3) dilated, a little sinuous at outer margin, the external one covered with fine, numerous spinules. Mid- and hindtibiae of normal structure for the genus.

Edeagus a little asymmetrical (Fig. 4), shortly bent ventrally at apex (Fig. 5). Eighth sternit as figured (Fig. 6).

Length : PE 1.5 mm-1.7 mm; total: 2.1-2.2 mm. Width: 1.3 mm.

Holotype: ♂, Pakistan, Hazara: Murree, 5.VI.1983, 2100 m, leg. I. Löbl-C. Besuchet.

Allotype: ♀, Pakistan, Hazara: Malkandi, 3.VI.1983, 1500 m, leg. I. Löbl-C. Besuchet.

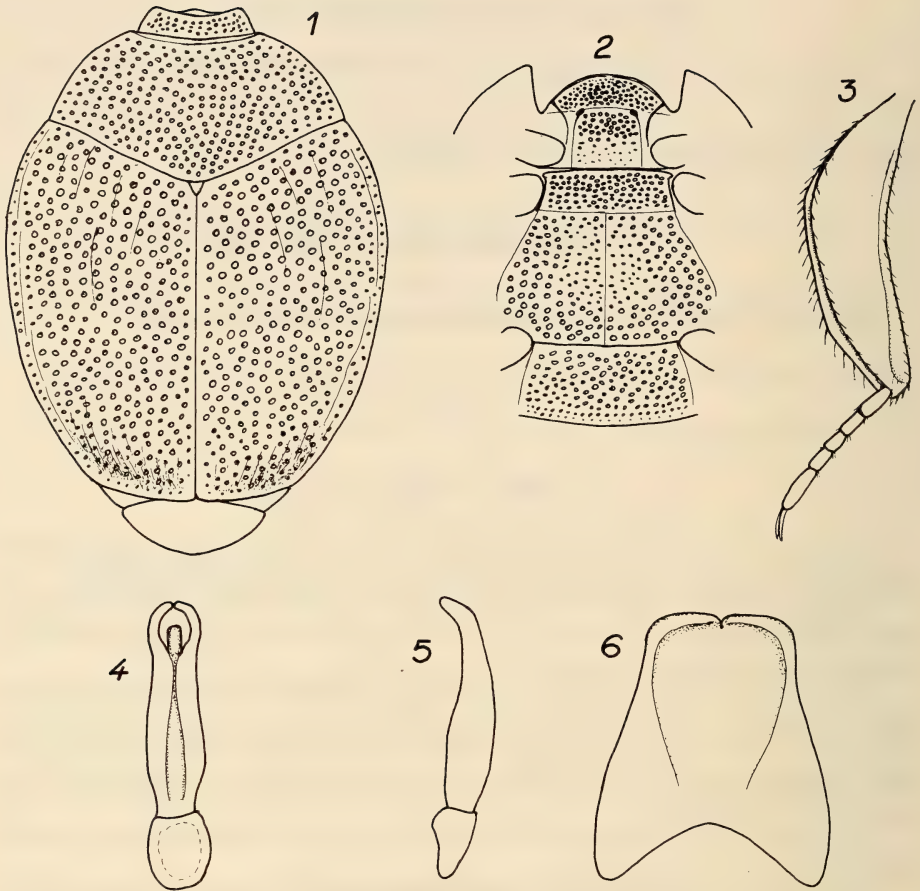


FIG. 1-6.

Anapleus monticola sp. n.

1: upper side. 2: under side. 3: anterior tibia. 4: eedeagus, ventrally. 5: eedeagus, laterally. 6: eighth sternite of male.

Paratype: sex undetermined, Pakistan, Hazara: Malkandi, 3.VI.1983, 1500 m, leg. I. Löbl-C. Besuchet.

In OLEXA's (1982) table it keys out with *A. jelineki* Olexa but differs from the latter in the structure of the sternum as well as of the eedeagus.

13. *Bacanius* sp. 1 (near *mikado*)

Localities: Swat: Madyan, 16.V.1983, 1400 m, 2 ex.; Hazara: Malkandi, 3.VI.1983, 1500 m, 16 ex., leg. I. Löbl-C. Besuchet.

Note: It is very similar to *B. mikado* Lewis, but the carinal striae a little convergent apically, and prosternal lobe smooth. Subspecies?

14. *Bacanius* sp. 2

Locality: Swat: Kalam, 12.V.1983, 2100 m, leg. I. Löbl-C. Besuchet, 1 ex.

15. *Abraeomorphus indus* sp. n.

Body oval, convex, reddish-brown, shiny. Pronotal base and suture blackish. Head flat, rather coarsely and sparsely punctured. Antennae yellowish-red, antennal club tomentose. Pronotum distinctly but not too densely punctured (2-3), intermixed with small punctulation. Marginal stria distinct only laterally, very fine at anterior margin. Basal pronotal stria bracket-shaped, distinctly crenulated. The space behind this stria with several punctures.

Elytra distinctly and rather sparsely punctured (1-3), the punctures with a tendency of forming irregular rows. Elytra distinctly impressed along the suture; impression reaching 2/3 of elytral length, with a regular row of elongate punctures, resembling that of a sutural stria. Epipleura with one punctured stria and with several punctures.

Pygidium covered with rather distinct but not too dense punctulation.

Prosternal lobe a little emarginate, finely margined, rather densely and thickly punctured (0.5-1.0). Prosternum nearly quadrate, its apical half similarly punctured as prosternal lobe. Carinal striae distinct, a little divergent basally. Mesosternum (Fig. 7) short, its anterior margin bisinuate, not margined. Mesosternal stria very distinct, rounded, crenulate, the mesometasternal suture invisible. Disc of metasternum very finely and sparsely punctured, the punctures becoming apically progressively larger, apical part rather coarsely and densely punctured. Lateral metasternal suture distinct, accompanied by a row of punctures, joining the mesoepimeral suture near the external edge (Fig. 8). Mesopostcoxal disc shiny, with several rows of rather large punctures. Mesoepimeron smooth, with distinct external stria and with some large punctures outside of it. Abdominal segment I similarly punctured as apical part of metasternum.

Legs paler, yellowish-brown. Front tibiae dilated, with 2-3 (+ 2) spinules at external margin, the mid- and hindtibiae indistinctly dilated, with some fine (1-3) spinules at outer margin.

Length: PE 0.9 mm; total: 1.0 mm. Width: 0.7 mm.

Holotype: A specimen of undetermined sex, Pakistan, Dir: Dir, 20.V.1983, 1500 m, leg. I. Löbl-C. Besuchet.

Paratypes: 38 specimens, same data as holotype. Two of them are kept in author's collection.

A. indus sp. n. differs from its nearest relative, *A. besucheti* Mazur, in the sculpture of the ventral side.

16. *Abraeomorphus* (?) *topali* Gomy

Localities: Swat: above Miandam, 10.V.1983, 2300 m, 49 ex., 17.V.1983, 2400-2500 m, 1 ex. Malam Jabba, 18.V.1983, 2500-2600 m, 2 ex. Hazara: Shogran, 3.VI.1983, 2400 m, 1 ex. Nathia Gali, 5.VI.1983, 2500 m, 33 ex., leg. I. Löbl-C. Besuchet.

Note: The specimens share all main characters with *A. topali* Gomy except the punctulation of the ventral side and the body size.

Subspecies?

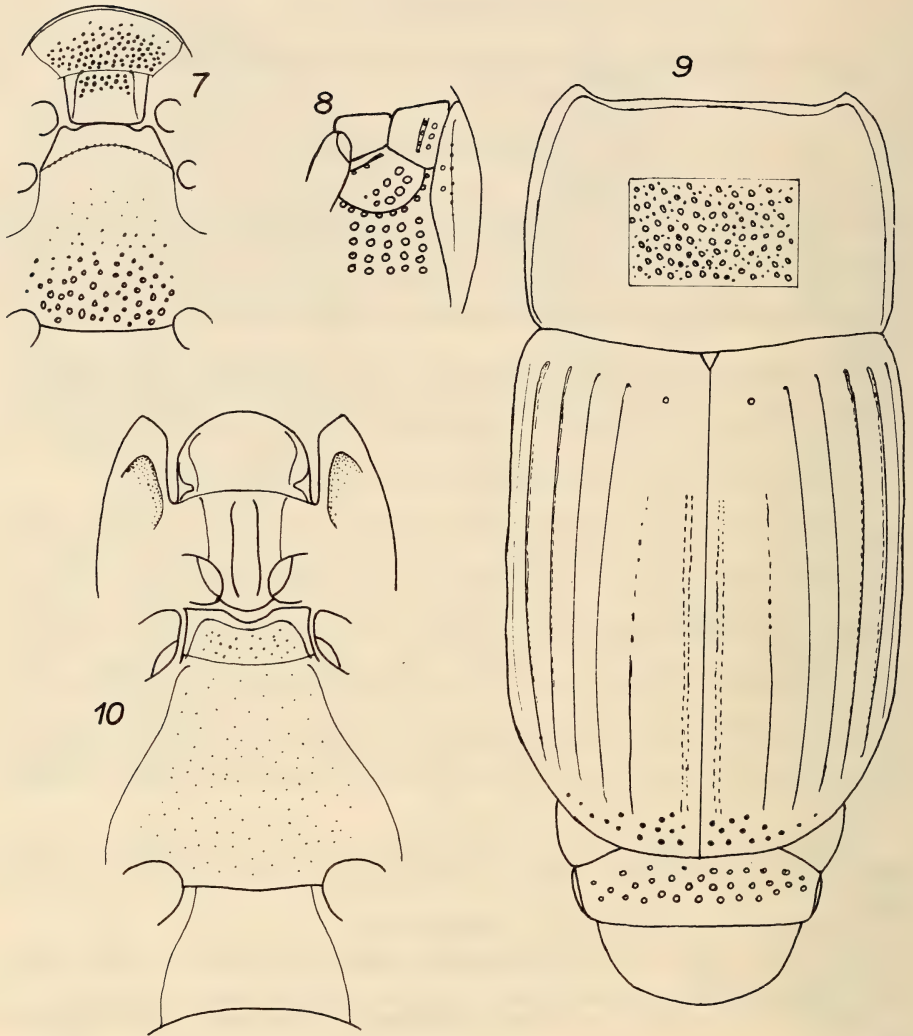


FIG. 7-10.

Fig. 7-8. *Abraeomorphus indus* sp. n. 7: under side. 8: pro-meso-metasternal region.
 Fig. 9-10. *Eutriptus xerxes* sp. n. 9: upper side. 10: under side.

17. *Abraeomorphus* sp. 1

Locality: Swat: Marghuzar, 8.V.1983, 1300 m, leg. I. Löbl-C. Besuchet, 1 ex.

18. *Abraeomorphus* sp. 2

Localities: Swat: Marghuzar, 8.V.1983, 1300 m, 1 ex.; Hazara: Shogran, 3.VI.1983, 2400 m, 2 ex.; Nathia Gali, 5.VI.1983, 2 ex., leg. I. Löbl-C. Besuchet.

19. *Eutriptus xerxes* sp. n.

Body elongate, convex, black, shiny. Head flat, finely but distinctly punctate (2-3). Clypeofrontal stria very indistinct and fine but apparently complete.

Pronotum weakly convergent anteriorly, its anterior angles a little jutting. Pronotal disc wholly punctured: punctuation composed of rather large punctures intermixed with fine punctuation. With foveiform point in front of scutellum. Marginal stria complete and distinct.

Elytra (Fig. 9) 1.5 times as long as broad. Dorsal striae 1-4 complete, becoming progressively finer towards the suture. The 5th one exists at apex only, replaced basally by a row of elongate punctures. Sutural stria double composed of punctures, shortened basally. Outer subhumeral stria complete. Epipleura bistrate. Apical part of elytra with several large punctures.

Propygidium with punctuation composed of large and small punctures. Pygidium reddish apically, finely punctate, sometimes almost smooth at apex.

Prosternal lobe rounded not margined, shallowly and sparsely punctate (3-4). Prosternum of similar punctuation. Carinal striae distinct, subconvergent anteriorly and posteriorly, indistinctly fused at the base. Mesosternum (Fig. 10) rather deeply emarginate, distinctly but sparsely punctulate (4-6). Marginal stria very distinct, complete. Metasternum more finely punctate than mesosternum.

Legs paler than body, brownish. Foretibiae curved, with 3 (+ 1) teeth and one apical spinule. Mid- and hindtibiae a little dilated, the hind ones with 2 spinules in apical part. Length: PE 1.9-2.0 mm; total: 2.4-2.5 mm. Width: 1.0 mm.

Holotype: Pakistan, Dir: Lawarai Pass, 21.V.1983, 2700 m, leg. I. Löbl-C. Besuchet.

Paratypes: Swat: Kalam, 12.V.1983, 2100 m, 2 ex., above Utrot, 14.V.1983, 2500-2600 m, 2 ex.; Chitral: above Bumburet, 25.V.1983, 2500-2700 m, 2 ex.; Hazara: Naran-Kaghan, 2.VI.1983, 2300 m, 2 ex.; Dir: Lawarai Pass, 21.V.1983, 2700 m, 2 ex., leg. I. Löbl-C. Besuchet. Two paratypes in author's collection.

It is the first representative of the genus known from this region. From the two other species of the genus it differs chiefly in the elytral striation: there are only 2 complete dorsal striae in *E. putricola* Wollaston and 5 in *E. usambaricus* Bickhardt.

20. *Paromalus babaulti* (Cooman, 1935)

Localities: Swat: above Miandam, 10.V.1983, 2300 m; 17.V.1983, 2400-2500 m; above Utrot, 13.V.1983, 2500 m; 14.V.1983, 2500-2600 m; Hazara: Naran-Kaghan, 12.V.1983, 2300 m, leg. I. Löbl-C. Besuchet, 27 ex.

Distribution: So far known only from Kashmir. New to Pakistan.

21. *Tribalus pakistanicus* sp. n.

Body oval, convex, blackish-brown, strongly shiny. Head excavated between eyes, the median part elevated. Lateral margins oblique, prolonged on epistom, strongly elevated.

Punctulation of the head rather distinct but not too dense. Antenna funiculus and club paler, yellowish-brown, the club tomentose, with 2 distinct sutures.

Pronotum narrowed anteriorly, the anterior angles jutting, a little depressed behind the marginal stria (Fig. 11). Lateral margins viewed from antero-lateral point a little sinuous. Marginal stria complete, very distinct at sides. Disc of pronotum distinctly, sometimes densely punctulate (0.5-1.0). Pronotal base with a row of very coarse and elongate punctures. Elytra 2.25 times longer as the pronotum, moderately rounded at sides. Punctulation of elytra fine, twice as rare (1-3) than on pronotum. Dorsal striae very indistinct and thin, hardly visible. External subhumeral as well as epipleural and marginal elytral striae thin, complete.

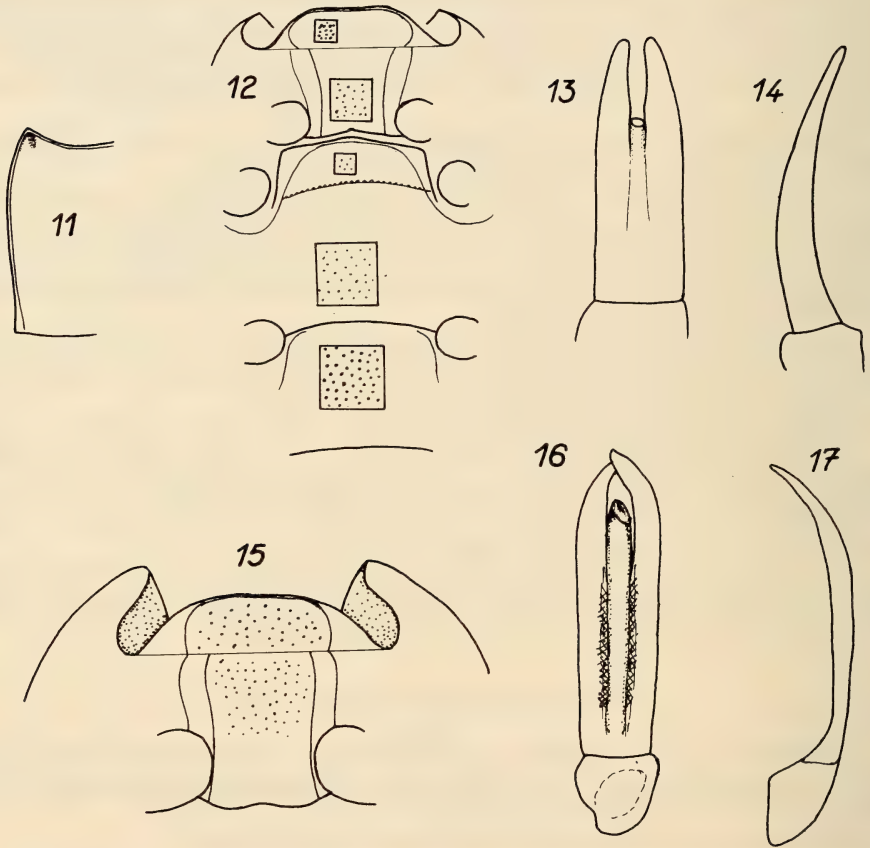


FIG. 11-17.

Fig. 11-14. *Tribalus pakistanicus* sp. n. 11: left pronotal margin. 12: under side. 13: edeagus, ventrally. 14: edeagus, laterally. Fig. 15-17. *Tribalus asiaticus* sp. n. 15: prosternum, under side. 16: edeagus, ventrally. 17: edeagus, laterally.

Propygidium punctured as elytra. Pygidium paler, reddish-brown, with the same punctulation as propygidium, the punctures becoming finer apically, the apex almost smooth.

Prosternal lobe a little emarginate anteriorly, margined, the marginal stria fine, joining the suture between prosternal lobe and pronotum. Disc rather densely (1-2) but not too coarsely punctulate. Prosternum (Fig. 12) wide, less dense punctulate than the prosternal lobe. Carinal striae thin, a subconvergent beyond the middle. Prosternal base emarginate. Mesosternum straight at anterior margin, distinctly but finely margined, sparsely punctulate (2-4). Meso-metasternal suture a little elevated, crenulate. Metasternum and abdominal segment I with similar punctulation to mesosternum but slightly stronger, especially on the abdominal segment I.

Legs paler than body, yellowish-brown. Anterior tibiae a little dilated, multispinulose. The mid- and hindtibiae of normal length, with some spinules or setae at outer margin. Male eedeagus as figured (Figs. 13, 14).

Length: PE 1.9-2.0 mm; total: 2.2-2.5 mm. Width: 1.3-1.5 mm.

Holotype: ♂, Pakistan, Swat: Karakar Pass, 19.V.1983, 1300 m, leg. I. Löbl-C. Besuchet.

Paratypes: 11 specimens of both sexes, same data as holotype. Two paratypes in author's collection.

Distribution: Pakistan, Bhutan (Sanchi, 7.-11.V.1972, 300 m, 1 ex., Basel-Bhutan Expedition), Nepal (Danda Pakhar, 1.VI.1977, 1600-2500 m, 1 ex., leg. M. Brancucci).

It belongs to the "*minus-scaphidiformis*" group, from whose members it differs in the structure of the male eedeagus (OLEXA 1980).

22. *Tribalus asiaticus* sp. n.

Body oval, moderately convex, blackish, shiny. Head finely and sparsely punctate, the margins raised over the antennal insertion. The antennae rusty-red.

Pronotum distinctly but not too densely punctate (4-5). Marginal stria distinct, complete. Anterior angles of pronotum longitudinally impressed. Pronotal base with a row of elongate punctures, a little depressed in front of scutellum. Elytra punctured as pronotum, without striae, at least with indistinct traces of these ones. Marginal epipleural, epipleural and marginal elytral striae fine but complete.

Propygidium and pygidium rarely punctulate, the pygidial apex nearly smooth.

Prosternal lobe (Fig. 15) slightly emarginate, margined anteriorly and distinctly but sparsely punctulate. Prosternum punctulate at anterior half like on prosternal lobe. Carinal striae sinuous anteriorly.

Mesosternum a little projected anteriorly, distinctly margined. Meso-metasternal suture crenulate. Metasternum and abdominal segment I punctured distinctly as the prosternum but more sparsely.

Legs paler than body, yellowish-brown.

Male eedeagus as figured (Figs. 16, 17).

Length: PE 2.0 mm; total: 2.4 mm. Width: 1.3 mm.

Holotype: ♂, Pakistan, Chitral: Bamburet, 24.V.1983, 2200-2300 m, leg. I. Löbl-C. Besuchet.

Paratypes: 44 specimens of both sexes, same data as holotype. Two paratypes in author's collection.

In OLEXA's table (1980) it keys out with *T. anatolicus* Olexa but it has the pronotum more finely punctulate. In some characters it resembles also *T. pakistanicus*. From both, *T. anatolicus* and *T. pakistanicum*, it differs in the aedeagus.

23. **Margarinotus aoudicus** (Marseul, 1861)

Locality: Hazara: Malkandi, 3.VI.1983, 1500 m, 2 ex., Naran-Kaghan, 2.VI.1983, 2300 m, 1 ex., leg. I. Löbl-C. Besuchet.

Distribution: A rare species, known only from Kashmir. New to Pakistan.

24. **Pactolinus bengalensis** (Wiedemann, 1821)

Localities: Lahore, 4.VI.1975, leg. R. Hołyński, 1 ex.; Swat: Saidu Sharif, 11.V.1983, 1000 m, leg. I. Löbl-C. Besuchet, 1 ex.

Distribution: Bengal, Burma, Afghanistan, Sri Lanka. New to Pakistan.

25. **Pactolinus orientalis** (Paykull, 1811)

Locality: Pakistan, without precise locality (Thérond, 1971: 254-255).

Distribution: India, China, Sri Lanka, Celebes, Taiwan, Thailand, Tenasserim, Viet-Nam, Pakistan, Seychelles.

26. **Hister assamensis** Marseul, 1857

Locality: Pakistan, without precise locality (Kryzhanovskij, 1980: 142).

Distribution: Afghanistan, Pakistan, East India, Burma.

27. **Hister baconi** Marseul, 1854

Locality: Chitral: Chitral, 29.V.1983, 1500 m, leg. I. Löbl-C. Besuchet, 1 ex.

Distribution: Recorded only from North India. New to Pakistan.

28. **Hister pullatus** Erichson, 1834

Locality: Swat: Saidu Sharif, 11.V.1983, 1000 m, leg. I. Löbl-C. Besuchet, 3 ex.

Distribution: Afghanistan, East India, Nepal, Assam, Tenasserim. New to Pakistan.

29. **Atholus daldorffi** (Bedel, 1906)

Locality: Pakistan, without precise locality (Thérond, 1971: 255).

Distribution: Pakistan, East India, Burma, Sri Lanka.

30. **Atholus maindronii** (Lewis, 1901)

Locality: Karachi (LEWIS 1901: 243).

Distribution: Afghanistan, Pakistan, India.

31. *Platysoma rimae* Lewis, 1905

Locality: Hazara: above Naran, 1.VI.1983, 2600 m, leg. I. Löbl-C. Besuchet, 2 ex.
 Distribution: Afghanistan, Pakistan, North West India.

PHYLOGENY AND ZOOGEOGRAPHY OF HISTERID SPECIES
 OF PAKISTAN

Even though only a low number of histerids is known from Pakistan so far, the zoogeographical relationships are analyzed.

The bulk of the Pakistani histerids (17 species = 54.8%) has an Indo-Malayan distribution: *Teretriosoma intrusum*, *Saprinus quadriguttatus*, *S. frontistrius*, *Chalcionellus pulchellus*, *Pactolinus bengalensis*, *P. orientalis*, *Hister assamensis*, *H. pullatus*, *Atholus daldorffi*, for instance. They belong to an ancient palaeotropical group which originated in mid-Tertiary. To this group belong also *Saprinus splendens*, a species widely distributed in tropical part of Old World, and, probably, *Eutriptus xerxes*. The other species of *Eutriptus* are known from the Canaries and East Africa and are of Ethiopian origin. The finding of the third species in Pakistan extends the distribution of the genus to the Oriental Region so that the *Eutriptus* ssp. should be classified with the palaeotropical group. Also *Tribalus pakistanicus* sp. n. and *T. asiaticus* sp. n. are placed here.

Paromalus babaulti, *Margarinotus aoudicus*, *Hister baconi* and *Platysoma rimae* are special among Indo-malayan elements as they are restricted to the southern side of the Himalayas.

The second group is the palaeomediterranean one comprising 4 species (12.9%). The species belonging to this group are mostly xerophilous. They evolved in the Mediterranean and/or in the deserts of Central Asia. This group is probably younger than the former and originated at the end of the Tertiary. The Pakistani species classified here belong to two zoogeographical elements: the Irano-Turanian and the East Mediterranean. The Irano-Turanian species live mostly in mountainous regions of Central Asia and Western China. In Pakistan they occur above 2500 m: *Saprinus flexuosofasciatus*, *S. sternifossa* and *S. austerus*.

One species is an East-Mediterranean element: *Saprinus subvirescens*.

Little is known about the origin of *Saprinus uvarovi* because of its rarity. Probably it is more widely distributed, from Saudi Arabia to Iraq and South Iran.

Teretrius mogul and *Anapleus monticola* are endemic species.

Six species of *Bacanius* and *Abraeomorphus* are recorded from Pakistan most of which being unidentified. They belong to a very old, primitive group with a world wide distribution and they cannot be assigned to one of the groups discussed above. The present day distribution is probably due to great climatic changes during the Pleistocene and is of a rather regressive type. Many species of *Bacanius* and *Abraeomorphus* have therefore a vast, pantropical distribution while others occur on small, local areas, often of disjunctive type.

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